

Ser. No. 10/691,790

RECEIVED
CENTRAL FAX CENTER

JUL 12 2007

Remarks

Claims 1-14 were pending in the application. Claims 1-8 were rejected. Claims 9-14 were withdrawn. No claims were merely objected to and no claims were allowed. By the foregoing amendment, no claims are canceled, claim 1 is amended, and claims 15-17 are added. No new matter is presented.

Claim Rejections-35 U.S.C. 103

Claims 1-4, 7, and 8 were rejected under 35 U.S.C. 103(a) as being unpatentable over DuBell et al. (US5758503) in view of Snyder (US2002/0116929). Applicants respectfully traverse the rejection.

DuBell et al. discloses a forward wall 26 which was asserted as the present rail. A flange 48 projects ahead of the wall. Identically, however, "a trailing flange 50 extends out from the trailing wall 28." Col. 4, lines 31&32. Continuing: "The forward 48 and trailing 50 flanges have arcuate profiles which facilitate flow transition between adjacent liner segments 12, and therefore minimize disruptions in the film cooling of the liner segments 12." Thus, any optimization of DuBell et al. would be for that function and not for a function that DuBell et al. fails to suggest.

By contrast, the present specification discusses the location of holes 150 (further subdivided into holes 220 and 222). These are positioned so that their discharge impacts the panel surface 104 ahead of the rail 114 and flows forward wrapping around the leading edge 106 and then aftward between the surface and an adjacent portion 160 of the heat shield panel on the bulkhead. The holes 150 serve to initiate film cooling along the panel interior surface. Thus, optimization to the presently claimed parameters could only be substantiated if DuBell et al. disclosed such a wraparound flow and associated functions. Instead, DuBell et al. appears to be directed solely toward providing a tight panel-to-panel transition for flow along their respective interior surfaces. Thus, it cannot be said that DuBell et al. optimization would yield the presently claimed parameters. It is further instructive and confirming that the Office action did not cite DuBell et al. as disclosing the holes 150 as recited in claim 5.

Snyder was asserted merely for adopting DuBell et al. inboard and outboard. Although the inboard and outboard use of DuBell et al. is reasonable, the Snyder citation, if anything, teaches away from the claimed invention. DuBell et al. substantially predated Snyder. Snyder

Ser. No. 10/691,790

could have adopted the DuBell et al. configuration but did not. Thus, Snyder teaches away. Furthermore, any hypothetical combination of Snyder and DuBell et al. would be toward a panel-to-panel junction (e.g., if one of the Snyder panels 48 or 60 was subdivided into separate edge-to-edge panels). There is no suggestion to adopt DuBell et al. at a leading edge adjacent a bulkhead.

Clearly, as reflected in the present drawings, the exemplary embodiment involves a modification of the configuration shown in Snyder to recess the leading rail section. This is not suggested by Snyder or even by combinations of Snyder and DuBell et al. Similarly, Snyder teaches away from modifications involved in the rejections below.

The foregoing amendment to claim 1 identifies the leading panel situation. New claim 17 identifies the relationship between these panels and the bulkhead panels.

New claim 16 identifies the asymmetry (e.g., an unrecessed trailing edge rail portion).

Claims 1-5, 7, and 8 were rejected under 35 U.S.C. 103(a) as being unpatentable over Sandelis (US6029455). Applicants respectfully traverse the rejection.

Sandelis element 26 was asserted as the hole of claim 5. It is instructive that this is along the FIG. 6 joint between "tiles". This situation is expressly not shown for other embodiments and no bulkhead junction is disclosed. Furthermore, the embodiment appears to involve a unique projection and channel interlocking. There is no indication that such a system would be optimized to yield the present parameters. There is further no suggestion to use such a system for a leading panel adjacent the bulkhead (e.g., as opposed to linking a plurality of panels to each other).

Claims 1-8 were rejected under 35 U.S.C. 103(a) as being unpatentable over Pidcock et al. (US6408628) in view of Halila (US5363643). Applicants respectfully traverse the rejection.

Pidcock et al. discloses a stepped combustor wall. Its barrier member 144 and effusion holes 140 were asserted as the claim 5 rail and holes.

Halila discloses another particular combustor construction. The Office action pointed to FIG. 16 elements 100a which appear to be internal rails. It is not clear the exact nature of the proposed combination. However, it is clearly conclusory. There is no support for the assertion

Ser. No. 10/691,790

that the pedestals 45 and rails of Pidcock et al. are equivalent. Clearly, they are different. The pedestals may serve heat transfer purposes while the rails may serve structural purposes. Thus, Pidcock et al. and the alleged Halila modification are not instructive beyond the stepped wall configuration of Pidcock et al. For example, they do not suggest use in a leading panel associated with the present bulkhead.

Furthermore, as is clearly shown in FIGS. 7&8 of Pidcock et al., there is no reason to believe optimization would yield the claimed dimensions. FIGS. 7&8 clearly show a large distance effective to have many rows of intervening pedestals.

Accordingly, Applicants submit that claims 1-17 are in condition for allowance. Please charge any fees or deficiency or credit any overpayment to our Deposit Account of record.

Respectfully submitted,

By 

William B. Slate

Attorney for Applicants


Reg. No.: 37,238

Telephone: 203-777-6628

Telefax: 203-865-0297

Date: July 12, 2007

I hereby certify that this correspondence is being facsimile transmitted this 12th day of July, 2007 to the USPTO, at Fax No. 571 273-8300.


William B. Slate